

ABSTRACT OF THE DISCLOSURE

Immunoassay methods and apparatus are provided which utilize flow cytometry, coated latex microspheres, and fluorochrome labeled antibodies, to simultaneously detect the presence and amount of several antigens or antibodies in a sample. The use of microspheres, beads, or other particles as solid supports for antigen-antibody reactions in order to detect antigens or antibodies in serum and other body fluids is particularly attractive when linked to flow cytometry. Flow cytometers have the capacity to detect particle size differences and are highly sensitive fluorescence detectors. It is practical to use beads of several different sizes, colors or shapes, each bead coated with a different protein or antibody, for the simultaneous detection of multiple analytes in a sample.

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